Ecotox Report for Case # P-18-0147

General

[redacted]

Report Status: Complete

Status Date: 09/18/2018

CRSS Date: 04/12/2018

SAT Date: 04/13/2018

SAT Chair: William Irwin

Consolidated PMN: N

Consolidated Set:

Ecotox Related Cases: [redacted]

Health Related Cases:

Submitter: JSR Micro, Inc.

CAS Number: None

Chemical Name: [redacted]

Use: [redacted] for [redacted] photolithography for [redacted] Analogs

Trade Name: [redacted]

PV-max(kg/yr): [redacted]

Ecotox Assessor: Gallagher, Jeffrey

Fate Summary Statement

Fate Summary Statement:

P-18-0147
FATE:
MW = 5000 with 1% < 500 and 5% < 1000
Solid
S = Negl.
VP
< 1.0E-6 torr at 25 °C (E)
BP > 400 °C (E)
H < 1.00E-8
(E)
POTW removal (%) = 90 via sorption

Time for complete ultimate
aerobic biodeg > mo
Sorption to soils/sediments = v.strong
PBT
Potential: P3B1
*CEB FATE: Migration to ground water = negl

PMN
Material:
Overall wastewater treatment removal is 90% via
sorption.
Sorption to sludge is strong based on high molecular volume.

Air Stripping (Volatilization to air) is negligible based on high
molecular volume.
Removal by biodegradation in wastewater treatment
is negligible based on high molecular volume.
The aerobic aquatic
biodegradation half-life is greater than months based on high molecular
volume.
The anaerobic aquatic biodegradation half-life is greater
than months based on high molecular volume.
Sorption to soil
and sediment is very strong based on high molecular volume.
Migration
to groundwater is negligible based on high molecular volume.
PMN
Material:
High Persistence (P3) is based on the estimated anaerobic
biodegradation half-life and the high molecular volume.
Low
Bioaccumulation potential (B1) is based on high molecular
volume.
Bioconcentration/Bioaccumulation factor to be put into E-Fast:
N/A.

Physical Chemical Information

Molecular Weight:	5000.0		
Wt% < 500:	1.0	**Wt% < 1000:**	5.0
Physical State - Neat:	Solid (est.)		
Melting Point:		**Melting Point (est):**	

MP (EPI):			
Vapor Pressure:		**Vapor Pressure (est):**	<0.000001
VP (EPI):			
Water Solubility:		**Water Solubility (est):**	<0.000001
Water Solubility (EPI):			
Henry's Law::			
Log Koc:		**Log Koc (EPI):**	
Log Kow:		**Log Kow (EPI):**	
Log Kow Comment:			

SAT
Concern Level

Ecotox Rating (1):	1
Ecotox Rating Comment (1):	
Ecotox Rating (2):	
Ecotox Rating Comment (2):	
Ecotox Route of Exposure:	No releases to water

Ecotox Comments

Exposure Based Review (Eco):	N
Ecotox Comments:	
Exposure Based Testing:	

PBT Ratings

Persistence	Bioaccumulation	Toxicity	Comments
3	1		

Eco-Toxicity Comment:

Fate Ratings

Removal in WWT/POTW (Overall): 90 Condition	Rating Values	Rating Description 1	2	3	4	Comment
Fish BCF:						
Log Fish BCF:						
WWT/POTW Sorption:	3	Low	Moderate	Strong	V. Strong	
WWT/POTW Stripping:	4	Extensive	Moderate	Low	Negligible	
Biodegradation Removal:	4	Unknown	High	Moderate	Negligible	
Biodegradation Destruction:		Unknown	Complete	Partial	—	
Aerobic Biodeg Ult:	4	<= Days	Weeks	Months	> Months	
Aerobic Biodeg Prim:		<= Days	Weeks	Months	> Months	
Anaerobic Biodeg Ult:	4	<= Days	Weeks	Months	> Months	
Anaerobic Biodeg Prim:		<= Days	Weeks	Months	> Months	
Hydrolysis (t1/2 at pH 7,25C) A:		<= Minutes	Hours	Days	>= Months	
Hydrolysis (t1/2 at pH 7,25C) B:		<= Minutes	Hours	Days	>= Months	
Sorption to Soils/Sediments:	1	V. Strong	Strong	Moderate	Low	
Migration to Ground Water:	1	Negligible	Slow	Moderate	Rapid	
Photolysis A, Direct:		Negligible	Slow	Moderate	Rapid	
Photolysis B, Indirect:		Negligible	Slow	Moderate	Rapid	
Atmospheric Ox A, OH:		Negligible	Slow	Moderate	Rapid	

Removal in WWT/POTW (Overall):	90					
Condition	**Rating Values**	**Rating Description**				**Comment**
		1	**2**	**3**	**4**	
Atmospheric Ox B, O3:		Negligible	Slow	Moderate	Rapid	
Bio Comments:	A fate study summary is available.					
Fate Comments:						

Ecotoxicity Values

Test organism	**Test Type**	**Test Endpoint**	**Predicted**	**Experimental**	**Comments**
Fish	96-h	LC50	*		* = no effects at saturation
Daphnid	48-h	LC50	*		* = no effects at saturation
Green Algae	96-h	EC50	*		* = no effects at saturation
Fish	-	Chronic Value	*		* = no effects at saturation
Daphnid	-	Chronic Value	*		* = no effects at saturation
Green Algae	-	Chronic Value	*		* = no effects at saturation

Ecotox Value Comments: UPDATED (September 18, 2018 Jeff Gallagher)
Predictions are based on the negligible water solubility of P-18-0247, an insoluble nonionic polymer (MW 5000 with 1% <500 and 5% <1000); Solid (est.) with an unknown MP (P); S = Negligible (P); effective concentrations based on 100% active ingredients and mean measured concentrations; hardness <150 mg/L as CaCO3; and TOC <2.0 mg/L.

Ecotox Factors

Factors	**Most Sensitive Endpoint**	**Assessment Factor**	**CoC**	**Comment**
Acute Aquatic (ppb):				An acute COC was not calculated because the acute toxicity values show no effects

Factors	Most Sensitive Endpoint	Assessment Factor	CoC	Comment
				at saturation.
Chronic Aquatic(ppb):				An chronic COC was not calculated because the chronic toxicity values show no effects at saturation.

Factors	Values	Comments
SARs:		
SAR Class:		
TSCA NCC Category?	None	

Recommended Testing:

Ecotox Factors Comments: UPDATED (September 18, 2018)

Focus Report/Decision Document:
Environmental Hazard and Risk
(P-18-0147)

Environmental Hazard: Environmental hazard is relevant to whether a new chemical substance is likely to present unreasonable risks because the significance of the risk is dependent upon both the hazard (or toxicity) of the chemical substance and the extent of exposure to the substance. EPA estimated environmental hazard of this new chemical substance using predictions based on the negligible water solubility of P-18-0147 (insoluble nonionic polymer; MW 5000 with 1% <500 and 5% < 1000). Based on the negligible water solubility, EPA concludes that this chemical substance has a low environmental hazard.

•
Substance does not fall within a TSCA New Chemicals Category
•
Predictions are based on the negligible water solubility of P-18-0147, an insoluble nonionic polymer (MW 5000 with 1% <500 and 5% <1000)
• Based on the negligible water solubility of the PMN, the acute and chronic toxicity values for fish, daphnia and algae are

all no effects at saturation.
• These toxicity values
indicate that the new chemical substance is expected to have low environmental hazard.

Environmental Risk:
Risks to the
environment from acute and chronic exposure are not expected at any concentration of the new chemical substance soluble in the water (i.e., no effects at saturation).

Potentially Useful
Information:
N/A

Comments/Telephone Log

Artifact	Update/Upload Time
[redacted]	[redacted]